



2001-07-12

Director General, Telecommunications Policy Branch,
Industry Canada,
300 Slater Street,
Ottawa, Ontario,
K1A 0C8.

Dear Mr. Helm:

**CWTA Comments - *Canada Gazette* Notice DGTP-002-01:
Public Discussion on Cell Phone Silencers (Devices Capable of Interfering
with or Blocking Mobile Telephone Communications)**

The Canadian Wireless Telecommunications Association (CWTA) is pleased to respond to the call for comments in the above noted proceeding.

EXECUTIVE SUMMARY

Industry Canada has called for public comment on the liberalized use of cell phone silencers. The widespread use of these devices, commonly referred to as jammers, is currently prohibited in Canada as well as in the vast majority of industrialized nations. In Canada, only law enforcement agencies are permitted the occasional use of jamming devices for civil defence purposes.

More and more Canadians are taking advantage of the benefits offered by wireless phones and other wireless devices. The rapid adoption of wireless communications in Canada, and indeed worldwide, has raised a number of issues in terms of acceptable social behaviour and appropriate responses to unacceptable behaviour. Never before in our experience have we had a phone that can go to the cinema, in the street, into a café, or lecture hall. Over time, Canadian society will develop behaviour to accommodate this new technology, as it has with many other technologies

The costs and risks associated with the use of jammers would be significant. The use of the technology would:

- interfere with emergency communications, including the three million calls a year to 9-1-1 or other emergency numbers;
- provide an opportunity for anti-competitive and discriminatory practices; and
- have the potential to block service outside of the target area.

Each of these risks carries a burden of legal liability. Widespread use would eventually create false perceptions regarding the reliability and performance of wireless networks, increasing costs for carriers and consumers alike. It is also far from clear that liberalizing the use of jammers will accomplish what Industry Canada wishes to achieve.

The cumulative effects of these impacts would impede the development of radiocommunication and telecommunication systems, reduce the efficiency of spectrum use, and reduce the quality of telecommunications services available to Canadians - directly contrary to the fundamental communications policy objectives of the Government of Canada.

The Canadian wireless industry believes that the vast majority of our customers are sensitive to those around them and act accordingly. In most instances, the ringing of phones or pagers is simply the result of forgetting to turn them off or setting the handset to silent notification, and not of a disregard for others.

The CWTA is of the view that in raising public awareness and promoting the courteous use of wireless phones and pagers, the approach the industry has taken adequately balances the rights and needs of all Canadians, including users and non-users, as well as spectrum licensees. So far, the reaction to our efforts has been positive, and as an industry, we are working with other groups to further deliver the "Cell Savvy" message.

It is the position of the CWTA that the current prohibition on the use of cellphone silencers should remain. Under certain circumstances, law enforcement and national security agencies have been granted authorizations by Industry Canada to use these devices. CWTA recognizes the unique status of these agencies and does not oppose this type of special authorization, however CWTA unequivocally opposes more widespread use or authorization of these devices.

The most reasonable public policy decision is to maintain Industry Canada's current policy regarding jammers and allow society to adapt behaviour to accommodate this new technology.

TABLE OF CONTENTS

EXECUTIVE SUMMARY	1
TABLE OF CONTENTS	3
1. INTRODUCTION	4
2. PUBLIC POLICY	5
3. RESPONSE TO SPECIFIC QUESTIONS	8
4. OTHER CONCERNS	20
5. CONCLUSION	22

1. INTRODUCTION

The rapid adoption of wireless communications in Canada, and indeed worldwide, has raised a number of issues in terms of acceptable social behaviour and appropriate responses to unacceptable behaviour. It is possible for Canadians to use their mobile cellular, PCS, and ESMR wireless phones in areas where third parties may be disturbed or inconvenienced.

Our society now considers communication by phone to be a necessary part of our working and social lives. When the phone became mobile, this communication activity moved into environments where it previously had no access. Never before in our experience have we had a phone that can go into a cinema, a café, or lecture hall¹. Over time, Canadian society will develop behaviour to accommodate this new technology, as it has with many other technologies.

CWTA and wireless companies have undertaken a number of initiatives to raise public awareness and promote the courteous use of wireless phones and pagers. Handset manufacturers have made vibration and other silent notification methods standard in all of their offerings. This approach addresses the concerns of those who wish to remain undisturbed while continuing to allow individuals to take advantage of the benefits provided by wireless technology. Ultimately, society decides and sets the rules of conduct by which we all live. We believe that our customers, for the most part, are sensitive to those around them and act accordingly. In most instances, the ringing of phones or pagers is the result of forgetting to turn them off or setting the handset to silent notification, and not of a disregard for others.

In Gazette Notice No. DGTP-002-01, Industry Canada calls for public comment on the liberalized use of cell phone silencers. These silencing devices, commonly referred to as jammers, would deal with these questions of etiquette by blocking all transmissions from wireless devices operating in specified frequency ranges. Industry Canada is seeking comment on whether the public interest would be served if the current occasional authorization of the use of these jamming devices by law enforcement agencies were broadened to authorize their use in wider, niche market and location-based applications.

CWTA does not oppose the use of cell phone silencers by law enforcement agencies as permitted by law and consistent with the mandates of these agencies, although we do believe that the public interest would be served by a more explicit policy concerning Industry Canada's current practices. However, CWTA unequivocally opposes more widespread use or authorization of these devices.

¹ Patricia Gillard, Karen Wale, Amanda Bow, *Telecommunications: Enemy or Friend of Life at Home?*, Information and Telecommunications Needs Research (SIMS), Monash University, 1997

It is the position of the CWTA that broadening the use of jamming devices beyond the current occasional authorization for law enforcement agencies is not in the public interest. Such an initiative could impede the proper functioning of these same agencies, would threaten public safety and could unduly infringe on Canadians' rights to freedom of expression. We question whether such an approach to an issue of how to improve behavioral norms would be effective, and note that it raises the issue of how far technology should regulate our lives. Licensing the use of an untried, unproven and unfamiliar technology so as to "correct" public behaviour is a strategy of dubious validity.

The CWTA continues to believe that the industry's approach to improving etiquette in the use of wireless devices adequately balances the rights and needs of all Canadians, including users and non-users, as well as spectrum licensees. The reaction to our efforts to date has been positive and as an industry, we are willing to work with other groups to further deliver the "Cell-Savvy" message.

In developing our response to the Gazette Notice, the CWTA has had the benefit of reviewing the Radio Advisory Board of Canada's work on this issue. The RABC has divided into four categories the perceived "problems" that the Department may be attempting to address with this process. The CWTA believes that the RABC's categorization is highly useful and commends it to the

The focus of the CWTA's comments, though, is the issue underlying all four categories of perceived problems: that is, the collision of rights. Does a person's right to quiet overwhelm or negate an individual's right to communicate? This is really an issue of manners.

2. PUBLIC POLICY

Canada

CWTA agrees with the Department's interpretation of the *Radiocommunication Act*, in that sections 4 and 9 prevent the use and importation of jamming devices. CWTA also believes that the use of these devices runs counter to some of the fundamental policy objectives of the government of Canada.

In *A Spectrum Policy Framework for Canada*, Industry Canada recognized radio frequency spectrum as a strategic national public resource. As such, a set of core objectives for spectrum policy were established, including:

- To promote and support the orderly development and efficient operation of radiocommunication systems and services to meet Canada's sovereignty and security needs as well as to yield economic, cultural and social benefits for Canadians;
- To further improve efficient and optimum use of the spectrum resource through adoption of advanced spectrum allocation and management

- techniques based on operational requirements and technical and economic viability;
- To ensure flexibility and adaptability and ease of access to the spectrum resource in response to technological advances, economic, social and market factors; and
 - To co-ordinate and establish well-balanced national spectrum and radiocommunication policies and plans by widely consulting with all interested parties and the general public.

Wireless telephony services also play an important role in fulfilling Canada's telecommunications policies, including the objectives set out in section 7 of the *Telecommunications Act*. These objectives include:

- To facilitate the orderly development throughout Canada of a telecommunications system that serves to safeguard, enrich and strengthen the social and economic fabric of Canada and its regions;
- To render reliable and affordable telecommunications services of high quality accessible to Canadians in both urban and rural areas in all regions of Canada;
- To enhance the efficiency and competitiveness, at the national and international levels, of Canadian telecommunications;
- To promote the use of Canadian transmission facilities for telecommunications within Canada and between Canada and points outside Canada; and
- To foster increased reliance on market forces for the provision of telecommunications services and to ensure that regulation, where required, is efficient and effective.

In CWTA's submission, the introduction of jammers would inhibit the realization of Canada's fundamental communications policy objectives by impeding the development of radiocommunication and telecommunication systems, reducing the efficiency of spectrum use, and reducing the quality of telecommunications services to Canadians. CWTA notes that wireless services today provide the only true competition in the market for local residential services. Wireline Competitive Local Exchange Carriers have focused almost exclusively on business markets in urban areas, while wireless carriers provide a viable telecommunications alternative to non-business as well as business customers across Canada.

Moreover, the CWTA believes there is also an issue of whether licensing such technology would violate Canadians' right to freedom of expression, contrary to the *Charter of Rights and Freedoms*. In our view, the potential intrusion on Canadians' rights is significant enough that Industry Canada should pursue this path only on the basis of clear and probative evidence that broader use of cell phone silencers is truly necessary in the public interest. Otherwise, CWTA questions whether the restraint on freedom of expression would qualify as a "reasonable limit prescribed by law [that] can be demonstrably justified in a free and democratic society."

The fundamental public policy question is whether the *silencing* of wireless devices (as opposed to the jamming of radio signals), ought to be a matter of social mores and behaviour, or whether Canadians should be permitted to use technology in an attempt to regulate the behavior of their fellow citizens.

International

Numerous countries around the world have taken steps to specifically outlaw the use of jamming devices. These countries include, among others, Canada's largest trading partner as well as nations that share Canada's common-law legacy.

The Federal Communication Commission in the United States issued a Public Notice in October 1999 outlining its position on the legality of transmitters designed to prevent or jam the operation of cellular telephones or other radio communication systems. This Notice states "the Commission's Rules do not permit these devices to be manufactured, imported, marketed or operated within the United States." Parties in violation of these rules may be subject to fines or imprisonment.

After conducting a public consultation in 1999, the Australian Communications Authority took the unprecedented step of issuing a declaration prohibiting the operation, possession, or supply of devices designed to interfere with radiocommunications or disrupt or disturb radiocommunications operating in the mobile telephone frequency bands. "Reports in North America about these devices being able to be operated under certain circumstances are untrue. The ACA has recently taken action against a supplier of devices described in the declaration. The ACA has no plans to revoke the declaration and, indeed, [they] are monitoring developments in case there is a need to extend the declaration to other similar devices²."

The Office of the Director of Telecommunications Regulation in Ireland will not licence jammers, as the *Wireless Telegraphy Act* of 1926 specifically prohibits interference to another user.

The Radiocommunications Agency (RA) of the United Kingdom has made its position well known with regard to devices able to block wireless phone calls. It is illegal to install or use these devices in the UK. Use of these devices would constitute an offence contrary to the *Wireless Telegraphy Act*. The RA has also stated it will take all necessary steps to ensure that cell phone jammers are not used in the UK.

France is another country that has maintained a prohibition on cell phone silencers. In June 1999, l'Autorité de régulation des télécommunications (ART)

² Kae Paviour, Radiocommunications Licensing Policy Team, Australian Communications Authority (communication with the author, 04/18/01).

issued a press release specifically stating that operation and implementation of jammers and filters is not authorized in France, and that it constitutes an offence punishable under the *Posts and Telecommunications Code*.

The importation, sale and use of radiocommunication jamming devices is expressly prohibited in Singapore, a country known for its policy emphasis on decorum and strict regulation of public behaviour.

The Federal Office of Communications, the telecommunications regulator in Switzerland, has specifically forbidden the sale, installation, and operation of jammers.

The Norwegian Post and Telecommunications Authority considers jamming devices illegal.

The Ministry of Posts and Telecommunications in Japan has permitted the use of jammers in certain public spaces, but their use is subject to a number of conditions. The use of these devices is limited to locations where the manager of the facility can easily inform people entering the area that such a device is in operation. Jammers may not be installed or operated in facilities and spaces through which many people pass freely, such as stations, roads and parks.

These devices may be placed in use only when necessary, and when in use, the operators must notify patrons of the existence of the device, and the fact that it is in operation. Operation of the device must be terminated if the device causes any trouble.

In Japan, strict installation and operational conditions have been placed on the licencing of these devices. Installations must be fixed in place, giving due regard to the presence of any medical equipment, providing sufficient distance to prevent any harmful interference. The devices must also provide sufficient distance from any people entering the premises to protect implanted medical devices, such as pacemakers, from harmful interference. The operator must not allow any interference to occur outside of the area in which it is installed, and must verify that no leakage occurs. In addition, before operation there must be an evaluation of the compatibility of the installation with personal medical equipment.

There is no information available to CWTA regarding the results or consequences of the Japanese policy.

3. RESPONSE TO SPECIFIC QUESTIONS

In the following section, CWTA will respond to the direct questions contained in the Notice.

a)(i) *What is the public interest, if any, that could support broadening the Department's occasional authorization of radio jamming devices?*

It is the position of the CWTA that the public interest does not support broadening the Department's current policy of occasional authorization of radio jamming devices.

The promoters of jamming devices have advanced four distinct applications for the devices: 1) Quiet Zones: locations such as restaurants, theatres, and other places where the ringing of a wireless phone or untimely conversation can be disruptive to third parties, 2) Security Zones: locations where some type of sensitive information may be placed at risk through the operation of a wireless phone, such as a corporate boardroom, 3) Shielding Zones: locations, such as hospitals and airports, where it is believed that wireless phones may interfere with important electronic equipment, and 4) Civil Defence Zones: locations where law enforcement or national defence agencies perceive a risk to the public due to acts of terrorism using a wireless device (for instance, to remotely detonate explosive devices). With the exception of the authorized use by law enforcement, CWTA disagrees that jamming devices are an appropriate response in these situations.

Quiet Zones

The proposed use of jamming devices to create quiet zones that would be free of any disruptive noise from wireless devices is a proposal to use technology to regulate the behavior of individuals. As such, Canadians should view the proposal with a great deal of concern.

As noted in an Editorial in the Montreal Gazette:

...it's the whole question of how far technology should regulate our lives. Yes, it is obnoxious – very – for the person at the next restaurant table to talk on a cellphone. But the way to deal with this bad habit is to change social mores through education, not techno-fixes that simply treat the symptom.³

CWTA agrees with the editorial writer that the issue is one of manners. By almost every measure, wireless devices are a fairly new addition to the range of telecommunication options available to Canadians, and have only recently gained widespread popularity in Canada. As such, Canadian society is still in the process of developing appropriate rules of etiquette for the use of these devices. Eventually, society will develop the rules of etiquette to self-regulate usage of these devices.

³ *Manners, not jamming*, Editorial, The Gazette (Montreal), March 9, 2001.

Clearly the wireless telecommunications industry has a role to play in raising the awareness of its customers and to remind wireless users about minding their manners when using their phones and pagers. Others have followed suit. Cinemas, restaurants and other establishments frequently remind their patrons to silence their wireless devices. As indicated by recent newspaper articles, these reminders appear to be achieving the desired results. According to a spokesperson for Famous Players “It still happens, but far less that it used to before we started making our presentations”⁴. The president of Alliance Atlantis Cinemas has said that patrons have learned to shut off their phones when they’re watching movies⁵.

The issue of inappropriate use of wireless devices has not been a pressing concern for restaurants or libraries in Canada. “It’s not something our members have brought to our attention,” said a representative of the Canadian Restaurant and Food Services Association⁶. According to a spokesperson for the Canadian Library Association, “I haven’t heard anyone mention this issue and I would think it’s partly the culture of libraries. People know how to use libraries and most libraries have had a policy in place for some time”⁷

We believe reminders are working, however, CWTA and its members would welcome Industry Canada as a partner to enhance our educational efforts in continuing to address the real problem, that of social behaviour with this technology.

The CWTA does not believe that the public interest would be served by introducing jamming technology to regulate human behavior. Indeed we believe by broadening the occasional licensing of jamming devices in order to create Quiet Zones, the Department would introduce a very real and serious threat to public safety as well as to civil rights. This is discussed more fully below.

Finally, we also note that enabling more widespread use of jamming devices could undermine or even negate progress made to date in educating wireless users as to how to use the features of their equipment so as to accommodate the needs and interests of people around them. If cell phone users come to expect that any location where their use of their phones might not be welcome will use a jamming device, they will have no incentive to develop good, considerate phone-use practices of their own volition. Licensing jammers could undermine the only reliable solution to this manners issue.

Relying on technology – especially technology that can be used without the knowledge or consent of the wireless user – to solve this issue of manners might lead to expectations that similar issues can be solved in the same way. In our

⁴ *We’re not hung up on cell-phone jamming*. Davenport, Jane, The Gazette (Montreal) March 9, 2001.

⁵ *Ottawa considers cell phone free zones*. Barrett, Tom, The Vancouver Sun March 8, 2001.

⁶ Naumetz, Tim, Southam News March 7, 2001.

⁷ *Canada debates cellphone jammers* MSNBC, March 8, 2001. <http://www.msnbc.com/news/541325.asp>

view, it is counterproductive to make wireless users passive, rather than active, participants in evolving socially appropriate behaviour.

Security Zones

The question of “corporate security” raises two distinct issues: intentional industrial espionage, and accidental breaches of security. Whether intentional or accidental, though, there is little evidence to demonstrate that the use of wireless phones represents a truly substantive threat to the security of sensitive information.

In cases where secrets are revealed inadvertently through an unattended, on-line wireless phone, the question rests on appropriate use of phones – wireless or wireline – and employee education, similar to procedures used to protect confidential documents with other technologies such as fax machines or electronic mail. Though a jamming device could prevent such inadvertent transmissions from occurring, this benefit must be balanced against the costs, including onerous regulatory and enforcement requirements.

In cases of industrial espionage, a jamming device could prevent wireless phones from sending this type of transmission. However, jamming cell phones cannot solve the problem completely. In addition to the fact that there are many other communication methods besides wireless phones, there are many types of wireless monitoring devices operating in many different frequency bands that could be used to covertly transmit sensitive information. The blocking of wireless phones for this purpose would not provide sufficient protection in this type of application and therefore would not provide any public benefit.

Shielding Zones

In locations where the objective is to protect sensitive medical or navigational equipment from potentially harmful transmissions, the introduction of any new transmitter in the form of a jammer does not make sense.

With the rapid growth and development of wireless communications and its benefits to the healthcare field, it has been important to examine and address public concerns and confusion about electronic medical equipment malfunction due to electromagnetic interference (EMI).

In the 1990s, the Canadian wireless telecommunications industry played a leadership role by encouraging research into electromagnetic compatibility (EMC) in healthcare, having funded major research at McGill University. CWTA has also sponsored an extensive information program for health professionals involving numerous discussion groups across Canada.

Inadequately shielded medical devices may be incompatible with many radio frequency (RF) sources, including: other medical devices; televisions; police, fire, ambulance, paramedic and taxi radio and walkie-talkies; wireless personal

computers and modems; wireless, cordless and landline phones; theft prevention systems; and garage door openers.

Health Canada formed a Task Force on EMC in Health Care in 1994. This Task Force has drafted recommendations that provide guidelines to hospitals in dealing with this issue. It has devised a multi-faceted approach that includes: 1) management of RF sources and medical equipment, 2) education, and 3) estimation of the EMI immunity of existing medical equipment.

The immunity level of most medical equipment purchased within approximately the last 10 years is unknown. It is not feasible to perform extensive susceptibility testing on all existing medical equipment. However, it is realistic to test much of this equipment's susceptibility to specific RF sources (e.g. equipment and sources likely to operate close to each other) by means of ad hoc test procedures. Such procedures cannot ensure that tested equipment is immune to all of the other potential sources of EMI that are not tested, but the procedure is likely to identify equipment that is susceptible at multiple frequencies. The CWTA believes that the approach recommended by the Task Force, including immunity estimation, is more effective and appropriate than liberalizing the use of jamming devices.

RF interference to medical or navigational equipment is by no means solely a wireless phone issue. Radio Frequency emissions come from many electronic sources. In CWTA's view, a reasonable hospital policy would allow staff, patients and visitors to use personal electronic devices (wireless phones, laptop computers, hand-held electronic games, etc.) in many areas of the hospital, but restrict use of these devices in areas where there is a concentration of medical devices. Total bans (particularly of wireless phones) in hospitals are not only difficult to manage and enforce, but also do not solve the electromagnetic interference problem.

In addition to EMI concerns, many hospitals are deploying wireless systems in an effort to provide hospital staff with information that is accurate and timely when they need it and where they need it without having to return to a fixed station to input or check information. A jamming device could disrupt these types of installations.

In locations where navigational equipment is in use, similar considerations apply. Although wireless phones may present one source of RF emission, they are by no means the only source. It is for this reason that transport regulators have placed precautionary restrictions on the use of all personal electronic devices during aircraft takeoff and landing. At other times, airline policy and the discretion of the aircrew determine when personal electronic devices, including wireless phones, may be operated.

The goal in locations with sensitive equipment is to reduce radio emissions, not increase them. For wireless phones, this is accomplished by powering the phone

off. While a jammer could, presumably, prevent call completion, it would also increase or add to the level of radio emissions and the risk of harmful interference. In this regard, the CWTA is unaware of any scientific testing of the potential interference between jammers and medical or navigational equipment.

For these reasons, CWTA believes the public interest is served by preventing the use of jammers in Shielding Zone applications.

Civil Defence Zones

With regards to this category of applications, it has been alleged that in certain situations, wireless phones could pose a risk to the public through their possible use in the remote detonation of explosive devices in acts of terrorism.

It is the CWTA's understanding that law enforcement agencies and national defence organizations, as a result of their unique status and responsibilities, already have the means necessary to manage radio frequency concerns of this nature. The CWTA does not oppose the use of jamming devices by law enforcement agencies as authorized by law and consistent with the mandates of these agencies. However, since these agencies already have access to jamming technology, the CWTA does not believe this concern requires a change to the Department's current policy regarding occasional authorizations for law enforcement agencies.

However, we would note that there exists a certain level of uncertainty within the industry as to the exact nature of the current occasional authorizations. It would benefit all parties involved if the Department were to specifically outline its existing policies regarding the occasional authorizations for law enforcement and public safety agencies.

a)(ii) If a public interest is demonstrated, what applications should be considered?

CWTA submits that the public interest is not served by liberalizing access to and use of jamming devices, and no applications should be considered. After weighing the inherent costs and risks against the potential benefits of wider access to and use of jamming devices, there is insufficient rationale for extending the Department's current policy. The potential intrusion on the rights and safety of Canadians is significant enough that Industry Canada should reject any change to their policy.

a)(iii) What are the potential risks, if any, associated with the use of these devices?

The Notice fairly characterizes the CWTA's primary concerns associated with the authorization of jamming devices, namely:

- Blocking emergency communications, including intentional blocking by criminals,
- Inadvertently blocking other service providers and users,
- The regulatory, enforcement, legal, and liability implications of allowing third parties to jam licenced services, and
- Unfair discrimination and anti-competitive practices in blocking among service providers and users

Each of these concerns is discussed in turn below.

Emergency Communications

One of the most often-cited benefits of wireless phones and pagers is the feeling of security provided by the ability to always call for assistance if needed. Another key benefit is that they provide individuals who need to remain available the freedom to continue their lives without being tied down to a wireline telephone. In a study conducted for CWTA, 42% of subscribers indicated that they had used their wireless phone to help them out of an emergency situation in 2000⁸.

It needs to be recognized that emergency communications are not limited to calls placed to 9-1-1. Other “emergency” users include: law enforcement and emergency response personnel; medical professionals and technical support staff who work “on-call” and need to be able to provide timely information in critical situations; and any individual that is waiting for significant information, such as a potential organ transplant recipient.

The use of a jamming device intended to eliminate the nuisance of a ringing phone would prevent all of these communications. CWTA believes that this is simply unacceptable to Canadians.

With respect to official emergency communications used by police, fire, ambulance and other agencies, it is becoming more and more commonplace for these agencies to deploy their emergency communications systems over public wireless networks. For example, Durham Regional Police uses a public wireless network operated by TELUS Mobility as an integral and key component of its communications system.

There are instances where emergency officials would use everyday wireless devices as they carry out their official business. For example an undercover police officer may carry an ordinary cell phone so as to be inconspicuous. Recently, at a coroner’s inquest in southwestern Ontario, a paramedic testified “he was forced to use his cell phone for emergency communication because of a faulty radio system.”⁹ The wireless phone was used to relay the conditions of his patients to staff at a hospital. Indeed, in many jurisdictions mobile phones have

⁸ Decima Research, *Usage and Attitudes Toward Wireless Communications in Canada*, May 2000.

⁹ As reported in *The Standard* (St. Catharine’s – Niagara), March 21, 2001, p. A3.

become standard equipment for paramedics, enabling them to obtain medical advice without leaving the patient's side.

There are also programs in Ontario and British Columbia that provide wireless phones to victims of spousal abuse in order to provide users an additional level of security. SupportLink, a program offered through the cooperation of Rogers Wireless, Ericsson Canada Inc. and the Government of Ontario, provides the use of 400 mobile phones for individuals identified as being at "high risk" of suffering domestic violence, sexual assault and stalking. TELUS Mobility, in partnership with Motorola, ADT Security Services and the Government of British Columbia, provide a similar program involving 110 handsets and 15 communities. TELUS Mobility also has a pilot program in co-operation with the City of Calgary Police Service.

Many other programs are aimed at enhancing the safety and security of Canadians through the use of wireless technologies, including the LifePage program that has been administered by CWTA. LifePage provides pagers to people waiting for organ transplants so that they can go about their daily routines knowing that there is a means to be contacted should a transplant become available. There are currently more than 2000 LifePage devices in operation.

Interference with these, or indeed any, legitimate communications is clearly contrary to the policy goal of facilitating the orderly development throughout Canada of a telecommunications system that serves to safeguard, enrich and strengthen the social and economic fabric of Canada and its regions.

Other Services and Users

Whether functioning properly or not, jamming devices have a potential collateral impact on services and users for which the jamming was not intended.

Jamming would inhibit non-voice wireless applications that do not pose a nuisance to anyone.

Using existing technology such as web enabled wireless devices, wireless users are able to communicate and to be productive without disrupting others around them. With the advent of 2.5G and 3G technologies, the number of non-voice wireless applications is projected to increase exponentially. Business or casual users in restaurants, airports, or on a commuter train are able to send and receive email messages and access the Internet during an otherwise unproductive period of their day. Parents and school children can exchange email messages while at work, shopping in a mall or underground concourse, on public transit or in the local library. These forms of wireless communications pose no evident nuisance to anyone, yet jammers would block them – perhaps without the knowledge or consent of the individual relying on his or her wireless device.

Jamming would also contribute to a (false) perception that the service provided by wireless carriers is inadequate.

To the extent that jamming eliminates, impairs or interferes with bona fide wireless communications, wireless customers will develop a false perception that wireless carriers have failed to provide an acceptable level of service. Wireless customers will attribute missed calls, blocked calls, dropped calls and the like to the failure of wireless carriers to properly provision their networks. In light of these false perceptions, wireless carriers will be faced with increased customer complaints regarding service quality. This in turn will increase the operating cost of wireless carriers and could potentially lead to a reduced degree of profitability on the part of wireless carriers, or increased prices borne by wireless customers – neither of which would be desirable or in harmony with the stated objectives of Canadian telecommunications policy, including the goal to render reliable and affordable telecommunications services of high quality to all Canadians. All of this would be exacerbated when in-building jamming signals propagate beyond the intended venue and interfere ("unintentionally") with the outdoor macro network.

In this regard, the CWTA notes the conclusions reached in a trial of jamming devices conducted by the Office of Telecommunications Authority (OFTA) in Hong Kong.¹⁰ OFTA undertook the test to examine the efficacy of jammers in providing Quiet Zones. OFTA tested two different models of jamming devices, one installed in a movie theatre, another in a shopping mall. The trial found that jammers could cause interference to normal operation of wireless phone service outside the premises where the devices are installed. During the trial, several base stations located inside buildings adjacent to the test sites were adversely affected by the jammers. OFTA estimated that a jammer might interfere with a base station located within 670 metres of the device.

Moreover, an improperly functioning jamming device has the potential to interfere with legitimate transmissions in the bands adjacent to those used for wireless telephones, including Public Safety users.

Legal and Liability Concerns

If jamming devices are permitted, the operators of the jammers could be held liable for damages resulting from the blocking of vital communications. This liability would extend to personal injury and potentially, the loss of life stemming from the blockage of medical or public safety communications, or monetary damages in cases where technical support staff cannot be reached. Monetary damages could also result from individuals missing important time-sensitive messages. Many services are now available using the improved data capabilities of wireless phones and pagers (i.e. e-mail, two-way paging, short message service) to provide investment information in near real-time. An individual using such a service to manage their finances would be put at direct risk of financial loss if these communications were blocked.

¹⁰ *Mobile Phone Immobilizers*, UCAC Paper No. 11/1999, Telecommunications Users and Consumers Advisory Committee.

These legal and liability risks would increase dramatically to the extent that jamming devices interfere with communications outside the facilities in which they are installed.

Financial losses can be remedied through litigation, but in CWTA's submission, any increased risk of personal injury or loss of life is unacceptable and cannot be sufficiently remedied. Good public policy should seek to prevent such risks where possible.

Discussion so far has focussed on apparently legitimate and well-intentioned applications of jamming devices. These devices also hold the potential to be used to assist criminal activity. Every year in Canada over 3,000,000 calls are placed to 9-1-1 from wireless phones to report such events as accidents, fires, and crimes in progress. In the wrong hands, jamming devices could prevent these calls as well as public safety communications. In addition, alarm companies are using wireless technology to respond to an increase in the incidence of cut telephone lines that lead into a business or residence, thereby immobilizing an alarm system. AlarmForce, for example, uses the Bell Mobility PCS/Cellular network to relay a signal to their monitoring centre in cases where the wireline phone connection is unavailable. A jammer would provide a criminal with the tool necessary to take the next logical step from cutting a phone line to blocking a wireless signal.

Furthermore, the requirement to enforce conditions of jammer use would place a tremendous financial and logistical burden on the Department. Given the current and likely continuing constraints on the growth of the Department, this would place the Department in the untenable position of being unable to enforce its own rules.

Finally, because the use of jamming devices constitutes a prior restraint on freedom of expression, public sector operators – and even those operating jammers in non-governmental public spaces – could be at risk of challenges based in the *Canadian Charter of Rights and Freedoms*, s. 2(b). In CWTA's view, the balance between public policy goals and private rights to use communications media is correctly reflected in the existing *Radiocommunication Act*, which states that no person shall, without lawful excuse, interfere with or obstruct any radiocommunication (s. 9)(1)(b). Unless the circumstances under which members of the public may use jamming devices are clearly set out – and closely patrolled – there is real potential for interference with other Canadians' expression without "lawful excuse".

Discriminatory Practices

The use of jammers may provide an opportunity for anti-competitive and discriminatory practices. These devices could provide an unfair competitive advantage to the operators of facilities where the jammers are installed by allowing the operators to selectively prevent or allow certain communications. In

this regard, jamming could be used to monopolize telecommunications within a given venue, contrary to the policy objective to increase the influence of market forces on the provision of telecommunications services.

For example, in the US, there have been many recent attempts to limit the availability of wireless services in airports in order to maximize revenues from the pay telephone services or other proprietary systems offered by the airport authority¹¹. Clearly these occurrences would escalate with the widespread authorization of jamming devices.

One can easily contemplate other scenarios whereby a venue owner introduces a jamming system with a view to making all wireless communications impossible within the venue, and thereby provide a captive market for the venue's private telecommunications system. Many hotel owners, for instance, insist that guests pay premium rates for local and toll calls made using the hotel's private telephone system. Jammers in this case would ensure that any communication made by guests would make use of the hotel's private system. This would eliminate the choices available to Canadians, which is directly contrary to the stated policies of the Department as well as those of the Canadian Radio-television and Telecommunications Commission. Such scenarios also raise issues pertinent to Competition law and policies. A relaxation from the current policy respecting these devices could lead to an unproductive quagmire of legal and regulatory issues with no benefit to Canadians or to public policy.

The potential of widespread use of jamming devices to thwart users' choice of telecommunications service provider is a serious and genuine threat to the Department's telecommunications policy. The CWTA submits that this threat exists irrespective of which type of disabling technologies identified in the Notice, including passive devices, is used.

In section 2(5) of the Notice, the Department identifies "Passive Jamming Devices" as those cases where a space or room has been constructed in a way that prevents the transmission or reception of radio signals within the shielded space or room (commonly known as a Faraday Cage). While the CWTA acknowledges that there are legitimate circumstances which would justify the utilization of such passive jamming techniques (including radio technology test laboratories), the CWTA has serious concerns that passive jamming techniques can and will be used for the purpose of monopolizing telecommunications services within the space or room in question. The concern is particularly acute if the space or room is a public area.

As an example, the CWTA is aware that some parties are currently developing proposals which would prevent the radio signal coverage provided by all licensed cellular and PCS operators from penetrating into a major Canadian public airport terminal. These parties are proposing that they will operate and control a cellular

¹¹ Brewin, B. *Airports ground use of wireless*, Computerworld, February 19, 2001

and PCS system within the terminal by use of the licensed operators' spectrum. They further propose that the customers of the licensed operators would be assured service within the terminal, as long as the licensed operators pay the parties a fee for use. The objective behind this scheme is clear – passive jamming would be utilized in order that the parties could extract monopoly rents from the users who, in this case, have already paid licence fees to the Department for use of the spectrum.

The CWTA submits that there is no demonstrable public interest in permitting jamming under these circumstances. CWTA further submits that any liberalization of the Department's current policy on the use of jamming devices could lead to these situations. Detecting and correcting these situations will require enforcement resources and could lead to lengthy, complex and expensive litigation – a cost that far outweighs any perceived benefit of a liberalized policy.

a)(iv) What potential adverse effects should Industry Canada address in establishing conditions of use?

Should Industry Canada determine that the potential benefit of allowing jammers outweighs the risks and costs of such devices, conditions of use must address all of the adverse affects listed in response to question a)(iii) and ensure adequate supervision and enforcement of all conditions. The introduction of jammers or other devices capable of “silencing” wireless devices into the Canadian market would generate a substantial number of operational, technical and enforcement issues which would themselves be dependant on the scope and nature of a decision by the Department to broaden the use of jammers. As such, CWTA believes that a separate consultation would be more appropriate to discuss conditions of use in further detail.

(b) What is the distinction, if any, between the use of these devices in private places as opposed to public places?

Installation of jammers in public places would pose the greatest risk of the negative consequences discussed earlier. These are the same locations where the potential nuisance factor of inappropriate use of wireless phones is highest. As noted, the difficulty of withstanding a Charter-based challenge to restraints on freedom of expression is also much greater with respect to public spaces.

In private locations, accepted social etiquette is much clearer, and even simpler to enforce. A simple request to turn off a phone should be all that is required to eliminate this nuisance factor. In such circumstances, there is no need for such devices. Owners of private space already have well-established legal rights to control both the egress and continued presence within the spaces they own or

rent. They do not need, nor should they be given, the right to interfere with lawful communications by others.

c)(i) If Industry Canada permits these devices on a broader basis, should licensing be restricted and if so, restricted to whom (e.g. law enforcement agencies, wireless service providers, or others) and to what frequency bands?

If the Department were to allow the proliferation of these devices beyond the present policy, enforcement of restrictions and operational conditions becomes extremely difficult, if not impossible. The Department will not have the resources to overcome the logistical problems inherent in enforcing and monitoring the use of these devices. Additionally, once authorized, the “grey market” will multiply the number, location and use of such devices. Many of the users of these grey market devices will have no interest in abiding by any restrictions the Department may have seen fit to impose.

c)(ii) under what operational conditions and technical restrictions should these devices be licensed?

CWTA opposes any change to the current policy permitting only limited licensing of jamming devices. Should the Department decide to permit further use of these devices, it should impose operational conditions and technical restrictions sufficient to prevent against the threats to public safety, impact on licensed service providers, concerns about anti-competitive conduct, and other legal and liability issues listed above. As discussed above, CWTA believes that a separate consultation would be more appropriate to discuss conditions in any detail.

c)(iii) are there etiquette protocols that manufacturers of jamming devices could put in the equipment to ensure that each jamming device operates only in the area within which it is licensed to operate?

CWTA is not aware of any etiquette protocols that could effectively achieve this objective.

4. OTHER CONCERNS

Licence Fees and Return on Investment

If Industry Canada chooses to broaden the occasional authorization of jammers, the impact of these devices on the economic value of spectrum must be considered. By allowing these devices Industry Canada would, in effect, be creating a super-licence holder who would have the unprecedented and extraordinary right to, at its own discretion, prevent an authorized use of radio

spectrum, impeding the orderly development and efficient operation of radiocommunication systems as well as degrading the efficiency of the use of spectrum resources, contrary to Department policy.

The spectrum used for cellular and PCS service is extremely valuable. Licence holders in these bands pay a substantial portion of all spectrum licence fees paid in Canada. The use of jammers has the direct impact of reducing the value of spectrum by foreclosing on the ability to generate revenue.

If these devices are permitted, the licence fees paid by their operators must reflect the value of the spectrum disrupted by their operation. These fees need to account for the aggregate of all licences that could be interfered with. In addition, fees paid for the operation of jammers must be credited to the current spectrum licence holders to reflect the opportunity lost as a result of the jammers.

The Department must also consider the economic impact that the widespread authorization of jammers would have on wireless carriers, including any negative effect on the ability of wireless carriers to earn a fair return on investments made for in-building coverage.

Wireless carriers have invested millions of dollars in enhanced in-building wireless coverage. This investment betrays the significant demand which exists amongst wireless customers for wireless service within closed venues such as office buildings, underground concourses, shopping malls, airports, train and subway stations, sports stadiums and arenas, entertainment complexes and other such places where Canadians work, live and play and need to communicate and be reachable. Generally speaking, but particularly so in the context of public venues, the expectation of wireless customers is increasingly that wireless carriers will provide a quality of indoor service that is on par with, if not superior to, outdoor service. This includes full interoperability of wireless services between the indoor and outdoor access network, and the transparent provision of services and features in both environments. In-building jamming would negate the substantial investment made by carriers to satisfy this demand for quality service, full interoperability and transparent provision of services and features. Such jamming would make it impossible for customers to place or receive calls, or at best, result in the provision of only a sporadic and diminished grade of service.

Trans-Border Issues

Much of Canada's spectrum management has been harmonized with the United States in part to facilitate such things as cross-border roaming on cellular and PCS networks. In areas along the Canada-U.S. border, the use of jammers may have an impact on services operating in the United States, where these devices are specifically prohibited.

5. CONCLUSION

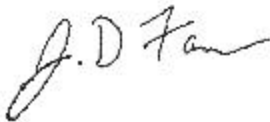
CWTA believes that the risks and costs associated with the use of jammers far outweigh the perceived benefit they may provide to their operators or the general public. For this reason, CWTA recommends that Industry Canada continue its current policy respecting these devices and issue an advisory warning against the manufacture, importation, marketing and operation of jamming equipment in Canada, similar to the Notice issued by the Federal Communications Commission in the United States and the Declaration issued by the Australian Communications Authority.

If the Department elects to broaden the use of jammers, the CWTA recommends that the Department undertake a separate consultation to deal with the myriad of operational, technical, enforcement, public safety, competitive, legal and liability issues that would be generated by a broader use of jamming technology.

The Canadian wireless industry will continue to promote the courteous use of our products and services while allowing every Canadian the opportunity to take advantage of the mobility and peace of mind they provide. CWTA and its members would welcome Industry Canada as a partner to enhance our educational efforts in addressing the real problem, that of social behaviour with this technology.

The CWTA appreciates the opportunity to submit the foregoing thoughts to this important public discussion.

Sincerely,

A handwritten signature in black ink, appearing to read "J. D. Farnes". The signature is written in a cursive, flowing style.

J. David Farnes
Vice President
Industry and Regulatory Affairs